

**PRAGUE ATLAS OF JOÃO TEIXEIRA ALBERNAZ – COMMENTED
COMPARASION MAPS FROM GUANABARA BAY**

Paulo Márcio Leal de Menezes, Alan Salomão Graça

Federal University of Rio de Janeiro
Geography Department
Laboratory of Cartography - GeoCart

Abstract. In 1994, with the cooperation of the Army Geographical Service of Czech Republic, it was possible to present by the first time, a manuscript of 17th century found in the Nostitz Library, Prague, Czech Republic. There was intention to publish a facsimile edition of this manuscript, and it was copied in microfilm for the researches' development. Unfortunately the document, some days after was stolen, inside the National Museum of Prague, and until today it was not more found.

The work is anonymous, and it was compared with samples of the old Portuguese cartography, and deduced its authorship to the Portuguese cartographer João Teixeira Albernaz I. The manuscript, as an Atlas, is not a direct copy of any other documents published by Albernaz I, but it is an independent one. The dating of the document takes to the years of 1628 and 1640, due to some analyzed characteristics presented in several maps.

This paper aims to present the Atlas Praguense, its structure and main documents, as well as the researches accomplished on the documentation, which characterized the dating and Atlas' authorship. In a second moment it will be presented a comparative study among the map of "Demonstração of Rio de Janeiro", belonging to the Atlas, with other maps designed by Albernaz, such as: "Carta do Rio de Janeiro", 1626; "Carta do Rio de Janeiro", 1627; "Descrição do Porto do Rio de Janeiro", 1630; "Capitania do Rio de Janeiro", 1631 and "Carta do Rio de Janeiro", 1640.

The comparative analysis will be developed through the graphic description, attributed geographical names, verification of characteristic signs of João Teixeira Albernaz, as well as, identifying the map presented in the Atlas Praguense as one of his authorship.

In this way this work intends to increase some information more on this prominent Portuguese cartographer's work.

Keywords: Albernaz Prague Atlas, Guanabara Bay Albernaz Maps, Historical Cartography.

1. Introduction

The document known as ATLAS PRAGUENSE, was found in the Biblioteca Nostitz Library, in Prague, Czech Republic. This document was already known, through the inventory of the family Nostitz books, however it was not given to it a larger importance, which only began to be shown, through the Czech historian, Josef Polišenský, who, together with Prof Dr Luis de Albuquerque, tried to develop a project for a facsimile edition of the Atlas, which would be denominated as “Libro universal de las navegaciones del mundo con las demostraciones de los puertos mas principales del” – Universal Navigation Book with the demonstrations of the most important harbors.

The original Prague Atlas was presented at the International Book Fair of Frankfurt am Main in 199. Some few years later, in 1994, it was stolen from the National Prague Museum, and it was not possible its facsimile edition.

The edition of PRAŽSKÝ TEIXEIRŮV ATLAS, 2004, edited by Simona Binková, was supported on the microfilm copies in black and white, which were made for the document's study, with a quite inferior quality and absolutely incapable to express the importance of the work. However, due to this importance and its significance for the Cartography, especially the XVII century Portuguese Cartography, the release and the popularization of the work, certainty made it known, with the hope of a fast recovery, which unfortunately until this moment didn't happen.

1.1. General Description of the Prague Atlas

The Atlas is composed of maps and text, worked in paper with dimensions of 463 mm x 360 mm, containing 44 leaves, where the first and the last five come in blank. A hardcover leather binding in chestnut color and gold ornamentation interfaces the maps and texts of the document. The face leaf presents the title, in gold letters on a red bottom. All maps are designed in colors.

The map titles are in Spanish, as well as the document title, however the maps texts are in Portuguese, except for those relating to Spanish colonial territories in America.

The Atlas has 114 maps, some of them occupying two leaves, such as: MAPA VNIVERSAL, on leaves 3v and 4r; OCEANVS SEPTENTRI / -ONALIS, on leaves 5v and 6r; BRASIL and COSTA DA AFRICA, 13v and 14 r; ÁFRICA SVL, on leaves 20v and 21r; PERU, CHILE, RIO DE LA PLATA, ESTRECHO OF MAGALLANES Y DE MAIRE CO PARTE DEL MAR DEL SUL, 34v and 35r, among others.

Several leaves contain maps, presenting details of coastlines, ports or accesses. Some occupy an entire leaf, like *DESCRIÇÃO DOS RIOS PARÁ E AMAZONAS* and *DESCRIÇÃO DA BAHIA DE TODOS OS SANTOS*. Some other were designed in a half leaf, as the map of the *ILHA DE TAMARACÁ e de PERNAOBVCO*. Still, in several other leaves, are shown 4, 5, 6, 8 or 10 small maps, presenting places details, in descriptions and demonstrations, of ports, accesses, islands, fortifications and cities.

The map origin is thank as Portuguese, due to some details that take to the this conclusion, as for example, a great majority of the maps presents the place names in Portuguese; the existence of explanatory notes about Portuguese navigators, their facts and explorations; some news on the vice-reigns in India, on the foundation of ports and fortresses, as well as detailed descriptions of other territories dominated by the Portuguese, such as Rio Amazon's Mouth and the Captaincy of Pernambuco. There are still logged references of the fights among English and Dutch.

For those reasons, it was supposed at first, that the Atlas had been designed among 1630 and 1640. However, doing a deeper map analysis, as well as of the associated information, it is possible to establish a smaller time period, between 1631 and 1633 (BINKOVÁ 2004). As examples, on leaves 22r and 22v, appears the explicit date of 1622 and it is the only date really presented in the whole cartographic documentation. The indications of other dating must to be extracted from information which accompanies the several maps.

1.2. Time Confirmation

The information search for time confirmation, come through historical events descriptions, discoveries, annotations and registrations considered important for the dating definition. The analyses accomplished by Binkova (2004), presented several reasons confirming the period of elaboration of the Atlas. Considering the explicit date of 1622, found in the mentioned leaves, on the leaves 32v and 33r is represented the South Pacific marine Map, where New Guinea is shown as an island. This information was known through the expedition of Pedro Fernandes Queirós, a Portuguese captain, who was in 1606, on service of Spain. However the first representation of this fact, only was published in the map of Manoel Godinho of Erédia, coming to public knowledge after his death in 1623. In this way it is possible to add at least one year in the explicit date. Another information tells respect the reference on the leaf 16r to Antonio Vicente [Cochado], whose letter served as model for João Teixeira Albernaz to draw River Amazon's delta, as the position of Patrão Mor of Pernambuco, carried out starting from 1624

A last identifiable year is the year of 1631, because the references about the Fortaleza of Santa Cruz (Saint Croix Fortress), built by the Dutchmen in the Island of Tamaracá (Itamaracá), coast of Pernambuco, besides presenting their land positions in the Pernambuco conquest, in 1630.

On the other hand, the dating denial can be verified because there is no evidences about the surrender of Three Kings' fortress, in Rio Grande do Norte in 1633, as well as on the events that happened in a subsequent time, as, for example, the fall of Paraíba in 1634. So, it is possible to restrict the time of its designing among 1631 and 1633.

At the end of this paper, a graphic comparison will be presented, corroborating with this conclusion.

2– JOÃO TEIXEIRA ALBERNAZ I (THE ELDER)

Before João Teixeira Albernaz, The cartographer Luiz Teixeira should be mentioned, who, according Cortesão (1944), would be the last of the great cartographers. He initiated his cartographic activities in the middle of the XVI century, prolonged for two decades inside the XVII century. As heir of great cartographic traditions of his time, cover a transition time and emergence of the flamenco school, substituting the Portuguese school, but still standing out through his works.

The codex “Roteiro de Todos os Sinais, Conhecimentos, Fundos, Alturas e Derrotas que Há na Costa do Brasil, desde o Cabo Santo Agostinho até o Estreito de Magalhães” – (Itinerary of All Signs, Knowledge, Fund, Heights and Defeats that there is at Coast of Brazil, from the Cape Santo Agostinho to Magalhães' Strait), it is one of his more acquaintances and prominent works, assuming a nonpareil importance in the History of the Cartography, for being a document that gathers the nautical instructions and description of an immense area of Brazil, in small parts and separate maps.

Luis Teixeira was son, father and cartographers' grandfather. Following his profession, João Teixeira, his son, was formed at his school, followed by other people of the same family. The business letter of "master's occupation of doing navigating maps" was received in 1602, and he worked in this profession until the second half of the XVII century. João Teixeira had in his activity time, a vast cartographic literature on Brazil, among the following ones:

- “Razão do Estado do Brasil”, 1613, Porto Library, where is reflected the influence of Luis Teixeira.

- Atlas Universal, chamado da Duqueza Du Berry, c. 1620;

- “Livro que da Rezão ao Estado do Brasil”, c. 1626, Biblioteca do Instituto Histórico e Geográfico, Rio de Janeiro;
- “Descrição de toda a Costa do Brasil”, 1627, Biblioteca de Paris;
- Folhas de Atlas Universal (6), Biblioteca Nacional, c. 1630;
- Folha Atlas do Brasil, 3 cartas, Biblioteca Nacional, ?;
- Atlas de Washington, 1630;
- Atlas “Estado do Brasil Coligido das mais certas notícias ~q se pode ajuntar Dõ Jerônimo Ataíde, 1631;
- Quatro Atlas com 31 ou 32 cartas “Descrição de todo o marítimo da Terra de Santa Cruz”, de 1640;
- Atlas com 23 cartas (2), Biblioteca Nacional do Rio de Janeiro, 1642;

Must be added to this vast cartographic bibliography, the Prague Atlas now presented and it is possible to have an idea of the contribution given by João Teixeira Albernaz I (The Old), to Portuguese and Brazilian cartography, as well as worldwilde, with his other works.

The time analysis of Albernaz´s cartographic maps and codex, shows clearly two periods of intense production: one among 1626 and 1631 and other among 1640 and 1642, with a gap of 9 years between them. Cortezão (1944) relates the first period, to the Dutch invasion in Bahia, reconquered in 1625, and the invasion of Olinda, Pernambuco, in 1630. The second period is linked to the restoration of the Independence of Portugal. The cartographic emptiness among those two periods may perfectly be correlated to avoid supply any information for the invaders, once an analysis of the Dutch cartography over the invaded area indicates that the information of the first Atlases were perfectly known by them.

In this way the Prague Atlas can perfectly be framed at that delimited time. In spite of offering some information on the Brazilian coast, the information are not extensive, but only located in small areas. In opposition, a best performance is observed on the other areas of the Portuguese domain, justifying the cartographer's absence from Brazilian cartography during this time.

3- GUANABARA BAY MAPS - 1626-1640

Practically in all codex, João Teixeira Albernaz had different objectives, on the representation of Guanabara Bay. Some of them in a impressive way, relating to the details of the area, like the representations of 1626, the best of all in geographical terms, and the one of 1627, which the great influence of the first is observed. However the representation of this place is degraded along the time, showing an representation quite different among his other maps, in spite of, the written descriptions be quite rich.

Taking advantage of the Prague Atlas Guanabara Bay map, a comparative research was developed among the maps regarding the same area, in other works of João Teixeira Albernaz I. This research was developed over the maps of 1626, 1627, 1630, 1631 and 1640.

As comparison elements were established the graphic plan, annotations on the map, details and toponymy.

3.1- Map of Rio de Janeiro (Baía de Guanabara) - 1626

Belonging to the codex existent in the Brazilian Geographical Historical Institute, "Livro que da Rezão ao Estado do Brasil", this map is the third of the Atlas. It is one of the best representations of the area, which is very close of the reality. It is a perspective view, showing all Guanabara Bay, the mouth of the bay, the Villegaignon island, the Jurujuba bay, Governor Island, at that time Cat Island. They are well represented the two lagoons in the coast, Piratininga and Maricá (Pertininga and Maricahá). The toponymy is poor, with only 16 names attributed along the whole map.

Despite the very realistic representations, some of them are omitted or presented mistakenly. For example, the positioning of Santa Cruz and São João fortresses, in opposition to São Thiago fort, which would be in the base of the Castle hill and it is represented at an island in front of Calabouço Point. So much Castle and São Bento hill are not also shown, as well as Cobra island is just a small mark.

Few rivers are denominated: Carioca, Pacoíbe (Guapi-açu), Macuco (Macacú), Vraiube (Guaxindiba) and Esteiro (Cachoeira). The figure 1 presents the Map of Guanabara Bay.



Figure 1 – Map of Rio de Janeiro, 1626

3.2- Map of Rio de Janeiro (Baía de Guanabara) from 1627

Belonging to the Bibliothèque Nationale of France, in Paris, the codex “LIVRO EM Q SE MOSTRA A DESCRIÇÃO DE TODA A COSTA DO ESTADO DO BRASIL E SEVS PORTOS E SONDAS DELAS feitas por João Teixeira Albernaz moço da camara de Sua Mag de e seu cosmógrafo em lixboa Anno de 1627”, signed by João Teixeira Albernaz. There are nineteen maps, all about Brazil and the fourth map corresponds to a map on Rio de Janeiro and Guanabara Bay.



Figure 2 – Map of Rio de Janeiro - 1627 – Bibliothèque Nationale de France, Paris

As shown in the figure 2, the map is almost a copy in a better quality of the map from 1626. It is not in color but in a black and white print. Practically there are no improvements in the document in relating to its aspect. Some places were not represented, like the Old City, the Sugar Loaf (Pao de Asucar) and it continues showing the same mistakes of the previous map, relating to São Bento's hills, Castle, São Thiago Fort and Ilha das Cobra. The place name Pacocoy identifies a river and a settlement, which is the current Magé. The current city of Itaboraí is seen like Vrajuba. In the total, 16 place names are shown.

The name Ilhas Maricahas, shown in the right inferior part of the map, were really known with this name in that time, but it is representing the current Ilha do Pai e da Mãe (Father's and Mother islands), in front of the lagoon of the same name.

After this map collection, all other maps that João Teixeira Albernaz produced, present a quite deformed Guanabara Bay, in an instant retreat in the cartographic drawing process.

3.3. Map of 1630

Belonging to the Library of Congress, in Washington, USA, the document “Taboas geraes de toda a navegação / divididas e emendadas por Dom Ieronimo de Attayde com todos os portos principaes das conquistas de Portugal delineadas por Ioão Teixeira cosmographo de Sua Magestade, anno de 1630”, is composed of 72 pages and 31 cartographic documents. Some pages were inserted in Spanish in the beginning of the Atlas and show some annotations from the time that was in hands of the King of Spain.

The fifth document, at page nine, presents the maps and plans of Brazil's ports and Prata River. It is represented on this page, eleven plans, including the one of Guanabara Bay. This plan is called “Descrição do Porto do Rio de Janeiro No estado do Brasil e altura de 23G”.

There nothing similar to the other maps previously designed, the Guanabara Bay is represented in a prolonged rectilinear form on the right side and with two small bays on the left side, Bay of Botafogo, and other to the bottom of the entire Bay. The City is shown among these two bays, as can be seen in the figure 3.



Figur3 3 – Plano do Porto do Rio de Janeiro – 1631 – Congress Library, EUA

The toponymy very is simplified, being presented the following place names: Barra, Forte de S. J., Carioca, Fortificação, Forte S. Tiago, Cidade de S., Sebastião, I. das Cobras, Viragalhão, Lage e Fortaleza de S. +. There is no scale associated to the representation.

3.4- Map of the Captaincy of Rio de Janeiro - 1631

This map is the twelfth in 36 maps of the Atlas "Estado do Brasil, coligido das mais certas noticias q. pode aivntar Dõ Ierônimo de Ataíde. por João Teixeira Albernaz, Cosmographo de Sva Mag.de/ anno 1631", which belongs to the Map Collection of Brazilian Foreign Affairs Ministry. The map style may be considered as a sketch, showing another retreat, once this Atlas had a real cartographic objective, relating to the outline and geographical details of Guanabara Bay, illustrate in figure 4.



Figure 4 – Carta da Capitania do Rio de Janeiro, 1631

An interesting detail however is defined by the blue strip that shows the access channel to the port, starting from the entrance of the bay mouth. It was the first Portuguese map to present this convention symbol.

On the left side of the map is presented a description of “FORTALEZA DE SANTA CRVX”, (Saint Croix Fortress), quite completed, but mistaken on its construction date, happened in 1568. Below this description, a plan of the fortress is presented in a scale of braces.

Opposing to the misrepresentation, the map has a reasonable wealth of descriptions. On the verse of the map, João Teixeira describes the main points of interest, in a very complete way using of the letters of the alphabet to indicate them. To each one, there is a more or less detailed descriptions of each place, and they are one of the most complete relating the city and the fortifications.

They are presented in the map 21 place names, many of them were not presented in any previous codex.

3.5- Map of Rio de Janeiro - 1640

The book “Descrição de todo o marítimo da Terra de S. Crvz chamado vulgarmente o Brasil. Feito por Ioão Teixeira, Cosmógrafo de S. Magestade. Anno de 1640”, is composed of 31 sheets and is in the Finances Ministry, in Lisbon, Portugal. The Map of Rio de Janeiro is the ninth in order inside the Atlas.

Initially may be alerted for the date difference between this document and the previous, of 1631, due to the problems of the invasions in the Brazilian territory.

As can be seen in the figure 5, the map is quite similar to the 1631 one, pointing similarities in the shape of the Botafogo Bay and Santa Cruz's Fortress.

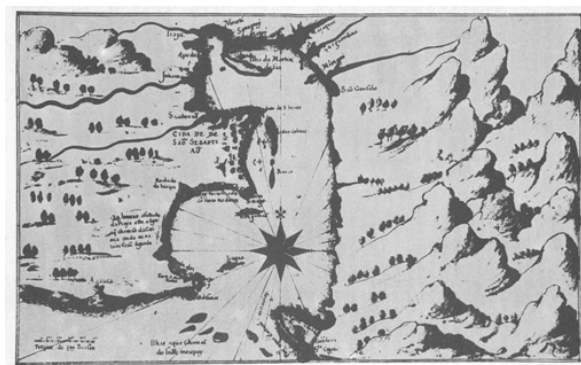


Figure 5
de Janeiro de 1640

– Carta do Rio

Some mistakes can be pointed in this representation, like the identification of the “Ilhas do Senhor meupay”, misidentifying the archipelago of Cagaras; the position of Villegaignon Island to the south of Morro do Castelo; the identification of the Governor's Island as Island of Martim of Sá and its positioning, moved to close to the continent, as well as its bad graphic representation.

The right side of the Bay is badly delineated, practically like in the previous ones, shown as a straight line, without apparent details, like the the small Bay of Jurujuba and San Francisco.

In this map, however, appears the representation of the Pedra da Gávea, the rivers located in the bottom of bay, have their correct names and all of them are in the right order, although other important rivers were not been shown.

Relating to toponymy, it is the richest presented among all other maps, presenting around 35 (thirty five) place names.

3.6- Demonstração do Rio de Janeiro –Prague Atlas – 1633 (?)

The “Demonstração do Rio de Janeiro. Em altura de 23 graos”, from the sheet 18v, together with Demonstração do Porto do Spo Santo, in the Prague Atlas, had the same characteristics of the last maps, starting from 1630, 1631 and 1640. The figure 6 presents the map Guanabara Bay.

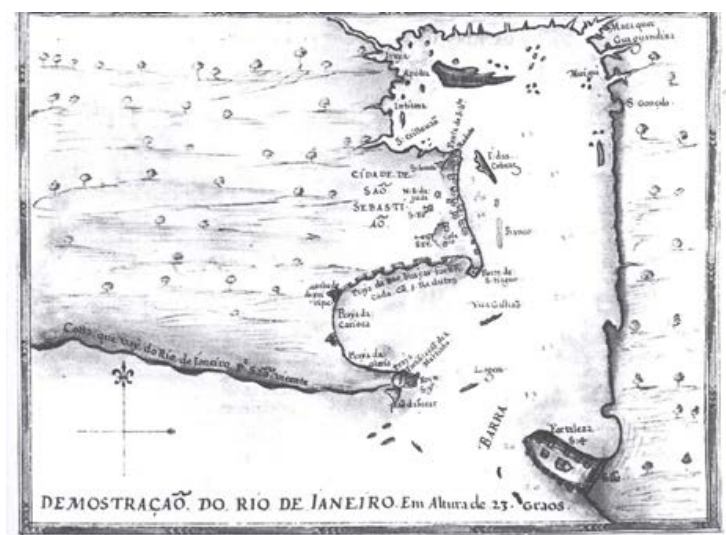


Figure 6 – Demonstração do Rio de Janeiro – Atlas Praguense – 1633 (?)

The Guanabara Bay is represented in the same way of the previous maps, with two small bays on the left side, the first placing the Bay of Botafogo,

with Olaria and Carioca beaches, the second placed after the City built area, representing São Cristóvão, Inhaúma and Irajá. The bottom of the Bay presents the rivers, but they are not identified, differently from the right side, where the Macaquer and Guaguandiuva rivers are identified. The Rio Mirigui has the same indication of the 1631 map (Marigui). The coast is drawn practically as a straight line, without other geographical indications, since S. Gonçalo until the Fortaleza of Santa Cruz. Close to this Fortress, is an indication of a small channel, which is also indicated in the 1631 map.

The current Governor's Island continues to have the same representation problems, so much relating for the size and shape, as well as for the associated place name mistakenly as Island of Martim of Saa.

Relating to place names, there are 32 (thirty two) identified. Comparing to the map of 1631, 20 (twenty) place names are coincident, and 26 (twenty-six) coincide with the 1640 map. However, some attention should be paid to the writing variations among some of them, as Irayá and Irajá, City of São Sebastião and City of S. Sebastião, Intiama and Inhauma, Guaguanduva and Guaguandiuva, among others. It is possible through the Annex I - Table of Place names of the Maps of Guanabara Bay, to make a comparative analysis of the existent place names in all of the maps, mainly introduced them in the maps of 1631, 1640 and Prague, allowing seeing the similarity among them.

3.7- Comparisons among the several maps

Some graphical comparisons were made, looking for similarities among the several maps and the Guanabara Bay map from Prague Atlas. Several common points were identified. The map with the best similarity was the 1630, with 7 areas, followed by the 1631, with 5 and finally 4 areas with the 1640 map. But in all maps it is possible to identify different drawers and this affirmative is applied also to the previous of 1626 and 1627.

These two maps were not compared to the one of the Prague Atlas because they have a graphical representation quite different from the others.

The comparisons are shown in figures 7, 8 e 9, where may be identified the common areas among the several maps.

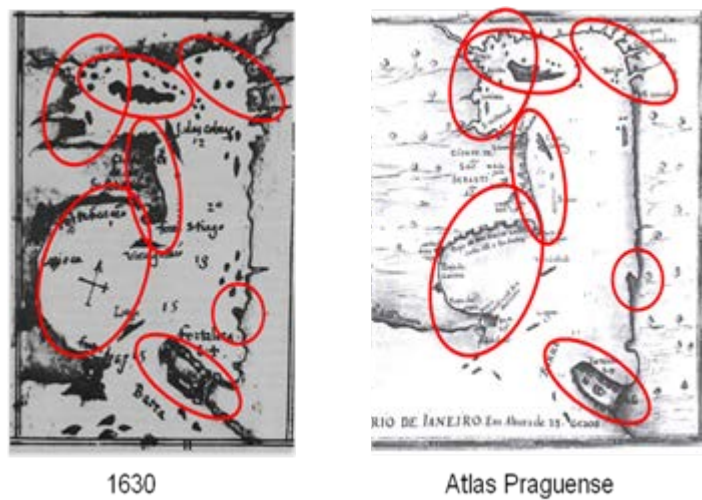


Figure 7 – Comparison among common features in 1630 map and Prague Map

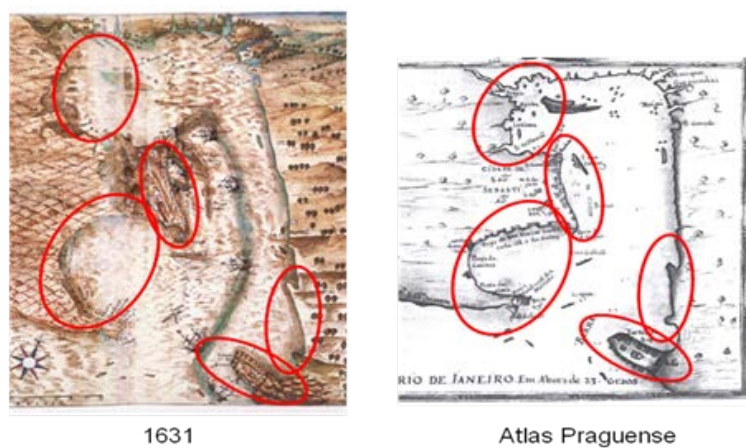


Figure 8 – Comparison among common features in 1631 map and Prague Map

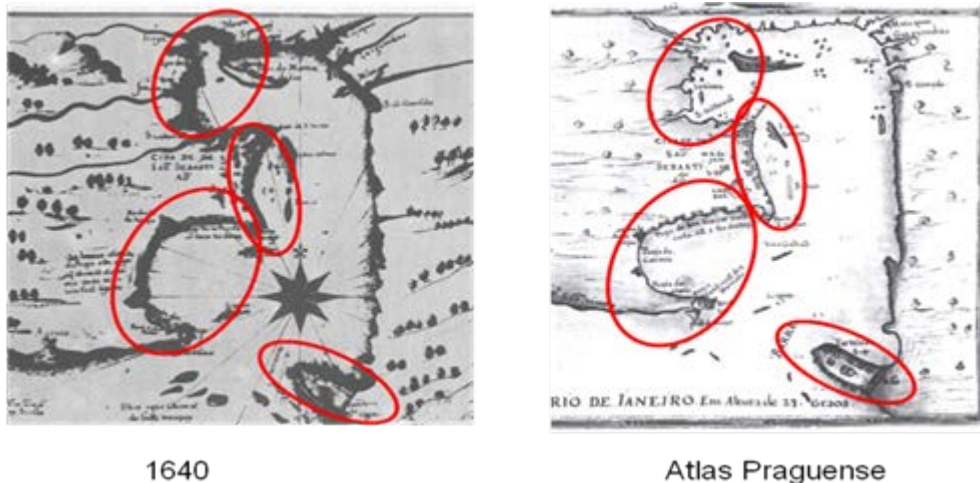


Figure 9 – Comparison among common features in 1640 map and Prague Map

4- CONCLUSIONS

Initially the main conclusion turns on the authorship of the Atlas. The style, information and representations, not only relating to the representative maps of Brazil, but to other parts of the world, dominated by the Portuguese, confirm the authorship for João Teixeira Albernaz I (the Elder).

On the dating, also it is not possible to diverge from the conclusions already done by Binková (2004), however, the analysis of the place names registered in the Annex I. Table of Place names of the Maps of the Guanabara Bay, shows the proximity among the maps of 1631 and 1640, and a question may be done, relating of which of them served as model for the other. The maps of 1626 and 1627 had few contributions for the toponymic analysis.

Relating to the geometric comparison, the maps of 1626 and 1627 are discarded, despite the closest of the reality, they differ entirely from the others, taken to believe in a possible radical change in the drawers on Albernaz service. There are evident similarities in the maps of Guanabara Bay from 1630, 1631, 1640 and Prague map. In common sense, the prolonged general form, with the right rectilinear margin, the bottom of the Bay with the indication of the rivers and the left margin presenting the city of Rio de Janeiro, pressed among the two bays. The entrance of the Bay is similar in all the four maps, once again confirming the authorship.

In this way, regretting the lack of the original ones to work, or at least a facsimile edition, like so many other existent ones, is the Portuguese and Bra-

zilian Cartography without an important document for his History. At this it is possible to argue and to question, how many cartographic documents, maps, plants and charts, that should belong to the Brazilian cultural collection, are "misplaced". It is just known the classified collection, but there is not a final and detailed survey among all organizations and collectors, creating conditions for the occurrence of misleading and even losses for the ignorance of the existence of all cartographic documents.

5- REFERENCES

Adonias, I., (1966) Catálogo de Plantas e Mapas da Cidade do Rio de Janeiro, Ministério das Relações Exteriores, Mapoteca, Rio de Janeiro,

Adonias, Isa. (1963)A Cartografia da Região Amazônica. Catálogo descritivo: 1500-1961. Rio de Janeiro: Instituto Nacional de Pesquisas da Amazônia,

Adonias, Isa. Mapa – (1993)Imagens da formação territorial Brasileira. Rio de Janeiro: Fundação Odebrecht,

Binková, S. ET alli, (2004)Pražský Teixeira atlas – Atlas Teixeira Praguense, Agentura vojenských informací a služeb, Praha,CZ,

Cortesão, Armando. (1935)Cartografia e Cartógrafos Portugueses dos Séculos XV e XVI. Lisboa: Seara Nova,

Cortesão, J., (1944)História da Cartografia do Brasil (Séculos XVI e XVIII) – Apontamentos do Professor Jaime Cortesão, Curso de Mapoteconomia, mimeografadas, Rio de Janeiro,

Mello Junior, D., (1988)Rio de Janeiro, Planos, Plantas e Aparências, João Fortes Engenharia, Rio de Janeiro,

Ministério da Educação e Cultura, (1968)Livro que dá Razão ao Estado do Brasil . Instituto Nacional do Livro,. Rio de Janeiro/GB/Brasil,

Moura Filha, M. B., (2003) O Livro que dá "Razão do Estado do Brasil" e o povoamento do território brasileiro nos séculos XVI e XVII, Revista da Faculdade de Letras CIÊNCIAS E TÉCNICAS DO PATRIMÓNIO, Porto, I Série vol. 2, pp. 591-613

Teixeira Filho, A., (1975)Roteiro Cartográfico da Baía de Guanabara e cidade do Rio de Janeiro – Século XVI e XVII, Coleção Histórica e Cultural do Rio de Janeiro, Livraria São José, Rio de Janeiro,

ANEX 1

[illegible]